DOCUMENT RESUME

ED 255 956 CS 504 887

AUTHOR Hufman, Melody; Barbour, Alton
TITLE Sociometry and Classroom Seat Selection.
PUB DATE Apr 85
NOTE 15p.; Paper presented at the Annual Meeting of the Southern Speech Communication Association (Winston-Salem, NC, April 11-14, 1985).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Classroom Design; College Students; *Communication Research; Interaction; *Interpersonal Attraction; Nonverbal Communication; *Personal Space; *Proximity; *Sociometric Techniques
IDENTIFIERS *Seating Preferences

ABSTRACT

Since attraction and close proxemic distances have been found to be associated throughout the study of nonverbal communication, a study was conducted that hypothesized that attraction would be a more important predictor of seat selection than any other variables. Subjects included students enrolled in introductory speech communication classes who had known one another for three and a half months. Subjects were given a form that asked them to list in order of preference those classmates with whom they wished to engage in two activities: working on a class project and attending a party. Next, subjects were given a seating chart asking them where they would like to sit if they attended a lecture and a class discussion. Subjects were also given a seating chart indicating that they had been assigned to the seat they requested; however, their sociometric choices--their first choice for task attraction and their first choice for social attraction--were identified as having been assigned to sit in a completely opposite section of the room. If the subjects wanted to change their seats based on the information given, they were asked to indicate their new seat preference. Results indicated that attraction had a significant role in the ways students used the space between one another and used such features as rows of chairs to manifest their relations with one another. (HOD)

Sociometry and Classroom Seat Selection

Melody Hufman Ph. D.
Amber University
1700 Eastgate Dr.
Garland, Texas

Alton Barbour Ph. D.
University of Denver
University Park
Denver, Colorado

A paper presented at the convention of the Southern Speech Communication Association, Winston-Salem, North Carolina, 1985.

SOCIOMETRY AND CLASSROOM SEAT SELECTION

Abstract

Melody Hufman Ph.D. Alton Barbour Ph.D.

This study investigates the interaction of two separate but related fields of study. The first, sociometry, is the measurement of group structures based on sentiment. The second, proxemics, is the study of how space communicates, and is a part of a larger field of study, nonverbal communication. Two hypotheses tested an interaction between attraction to others in a classroom and seat location in relation to those identified as attractive. The results showed that seating is not random but is very purposeful, and that purpose is attraction. Undoubtedly other variables enter into seat selection, possibly variables equal to or more important than the attraction structure of the group. But in this study, attraction was shown to have a significant role in the ways in which students used the space between one another and used such semi-fixed features as rows of chairs to make manifest their relations with one another.

SOCIOMETRY AND CLASSROOM SEAT SELECTION

Melody Hufman Ph.D. and Alton Barbour Ph.D.

To know the sociometric structures of a group is to know the sources of problems and possibly the means for mobilizing the group for concerted action. Most professors would claim to know on an intuitive level that the way in which the group arranges itself physically, constitutes a form of action sociometric. Of course, knowing something and proving it are two different things. Sometimes the relations in the group are not all that clear based on who sits with whom and where, but they are not accidental.

Sociograms, the tools for visually displaying sociometric data, utilize space as a metaphor for attraction (closeness and distance) the same way in which a slide rule utilizes space along a board, as a metaphor for relations between numbers, and in both cases the metaphor is apt. Likewise, there appears to be a relationship between the ways that people feel about one another and how they arrange themselves in physical distance from those persons. This study is an investigation which tests that apparent relationship between physical space and feelings of attraction, in the setting of the typical classroom.

"Perhaps the best supported proposition about personal space is that positive affect, friendship, and attraction, are associated with close proximity" (Sundstrom and Altman, 1976, p.50). Throughout the research on proxemics, this principle has been found to be true. The basis for Hall's theory of proxemics is that the smaller the distance that can be maintained between two people without producing discomfort on the part of either person, the closer their relationship is.

The research has shown that attraction may be communicated in part through close proxemic distances. Mehrabian (1968) indicated that subjects stood closer to persons they liked than they did to those they disliked. When he showed subjects pictures of people standing close to each other, they assumed that the people in the pictures liked each other more than those who stood further from each other. Close distances seemed to be equated with friendliness and distance seemed to be equated with disliking.

Schaefer and Higgins (1976) reported that the more a young boy was liked by his peers, the more desire they had to sit next to him. This research seemed to indicate that close proxemic distances were associated with attraction. Byrne, Lamberth, and Ervin (1970) found that subjects who were attracted to each other stood closer together than subjects who were not attracted to each other. Allgeier and Byrne (1973) duplicated these results. They found that subjects sat closer to others toward whom they were attracted than to those whom they did not feel attracted.

This phenomenon also exists in the classroom. Mehrabian (1981) suggested that when students chose their seats in the classroom, they probably chose to sit next to their friends. They may use these close proxemic distances to facilitate their friendships or relationships. On the other hand, they may choose to sit close to a classmate in order to communicate attraction to that person.

But there are other ways of explaining why people sit where they do. Not only can a seat choice communicate attraction in the classroom, but it also may affect the students' interaction in the class. Koneya (1973, 1976) and Adams (1969) found that some seats seem to encourage interaction. Students who sit in a triangle which has the front row as its base and the center seat of the third row as its top make the most verbal contributions in class. When given a choice of seats, high verbalizers chose to sit in this area while low verbalizers had a tendency to sit outside this zone. When Koneya assigned high verbalizers seats outside the interaction triangle, they made fewer verbal contributions than when they were allowed to sit inside the triangle. Moderate verbalizers made more contributions when they sat inside the triangle of centrality than they did when they sat outside it.

Becker, Sommer, Bee, and Oxley (1973) found that students who sat in front of the classroom had better interpersonal relationships with the instructor. Those students liked the instructor more than did their classmates. They perceived the instructor as being like themselves (Schwebel and Cherlin, 1972). Schwebel (1969) discovered that both the instructor and the students believed that students who sat near

the front were more attentive. These students appeared to be responsive to the instructor and to the class activities.

Walberg's (1969) research suggested that the students who sat at the front had different characteristics than those who sat at the back.

> They indicated that they liked school and have good study habits.... They feel that their teachers consider them desirable students and hard workers....(Pgs. 67-68).

Students who sit at the front give an appearance of being more concerned about their school work.

Students who sat at the back had a completely different set of characteristics:

> They indicated that they were unhappy with school.... It is not important for them to get good grades or have their classmates admire their work. They say that teachers think of them as lazy or able to get things done easily. They.... feel they have gained most knowledge from their own observations rather than from reading and school (Walberg, 1969, pgs. 67-68).

Students may be indicating their interest in the class by where they choose to sit.

Dykman and Reis (1977) suggested that some students select seats that facilitate privacy. Their research reflected that those students who sat in the back or in the periphery of the room tend to have low self concepts. These students also had poorer attitudes about school, poorer attitudes about class involvement, less liking for the teacher, and low grade expectations. These students felt vulnerable and inadequate. 'By distancing themselves in the seats that reduce the probability of inclusion, students minimize the risk of self-deprecating experiences" (p. 352).

Since throughout the study of nonverbal communication under many different types of circumstances attraction and close proxemic distances have been found to be associated, these researchers hypothesized that attraction would be a more important predictor of seat selection than any of these other variables.

Hypothesis One: In the actual setting, subjects will more likely to be sitting adjacent to others toward whom they are attracted than to be sitting away from them.

Hypothesis Two: Subjects will be more likely to alter their seat choices so that they are sitting near those individuals toward whom they are attracted than they will be to maintain their original seat choice when they are given a choice.

Method

Sample

The sample was taken from a large downtown college and a middle-sized university. These students were enrolled in introductory speech communication classes. Classes ranged from 22-35 members. Subjects had known one another for three and a half months (N=112).

Instruments

Sociometric Measure. Subjects were given a form which asked them to list in order of preference those classmates with whom they wished to engage in two activities. They were allowed to list as many or as few as they wished. The sociometric test was constructed according to the guidelines established by Moreno (1953). Subjects could choose anyone in the classroom they wanted. They were asked to select members for two specific activites: working on a class project and attending a party. Their selections were confidential. Time lag between sociometric test and seating change test was two to five days.

Preference of Seat Measure. Subjects were then given a seating chart which asked them where they would like to sit if they attended a lecture and a class discussion. The seating chart had five columns and five rows. The instructor's desk was placed on the chart so that the students could determine the front of the room. Neither the name of the speaker nor the topic of discussion were given to the subjects in an attempt to minimize the effects of these variables.

Sociometric Seating Change Measure. Subjects were given a seating chart which indicated that they had been assigned to the seat they requested, however, their sociometric choices, their first choice for task attraction and their first choice for social attraction, were identified as having been assigned to sit in a completely opposite section of the room. For example, if they chose to sit at the front right, their choices were identified as sitting at the left in the back of the room. The persons toward whom the subjects were attracted were identified as placed as far away from the subjects' seating preferences as possible. This test was administered one class period after the first measure had been completed. If the subjects wanted to change their seats based on the information given, they were asked to indicate their new seat preferences.

Actual Seating Chart. The instructor of each class also provided the researchers a seating chart which indicated where the students actually sat.

Results

The first hypothesis was designed to determine whether or not students actually sat by their sociometric choices. The seating charts were analyzed to determine whether the subjects' sociometric choices sat in front of, in back of, or on either side of the subject in question. Ninety-seven out of 112 times, students were sitting by someone toward whom they were attracted. The chi square was 60.036 which was significant at .05.

(Insert Table 1)

A secondary analysis was performed to determine whether students adopted particular seating positions relative to others toward whom they felt attracted. This analysis was limited to the relative positions of the first sociometric choices. The results showed that students had a tendency to adopt side-by-side positions with their first sociometric choices; they did not sit in front of or in back of their first

sociometric choices as often. Eighty-three percent of all the subjects sat in the side-by-side position. The chi square was 27.563 which was significant at .05.
(Insert Table 2)

The second hypothesis investigated whether or not the desire to sit near their sociometric choices was strong enough to cause the students to give up a seat that they preferred. In this case students were asked if they wished to give up a preferred seat in order to sit by others toward whom they were attracted.

This hypothesis was not supported. Students reported that they would not change their original seating choices so that they could sit by their sociometric choices. They had a strong tendency to maintain their original seat choices. Seventy percent of them did not wish to change seats. The chi square was 17.926 which was significant at .05. Apparently their original seat selections were more important to them than sitting by students toward whom they were attracted.
(Insert Table 3)

DISCUSSION

The results tended to indicate that students actually sat by others toward whom they were attracted. However, when they were asked if they would give up a preferred seat to sit by their sociometric choices, they responded no. These results may be explained partially by where the students actually chose to sit, because the students wanted to sit in the preferred seats (Hufman, 1983, Hufman and Barbour, 1984).

These preferred seats have been found to be associated with qualities and circumstances which students would value. For example, Moxey (1966) and Kinarthy (1975) found that students who preferred to sit at the front of the classroom tended to make better grades than those who preferred to sit at the back. Hare and Bales (1973) and Schwebel and Cherlin (1973) discovered that when they asked students to evaluate each other, the students felt that those persons who sat at the front

were more interested in the class and were perceived more positively by the instructor. Becker, Sommer, Bee, and Oxley (1973) found a positive correlation between good interpersonal relationships with the instructor and sitting at the front of the classroom. Pedersen (1977) found that students who had visual access with the instructor because they sat near the front enjoyed both the instructor and the class more than did the other students. Since these positive phenomena were associated with the seats where the students wanted to sit, perhaps students were not willing to give up these communicative advantages to sit by others toward whom they were attracted.

In actuality, most students did sit by others toward whom they were attracted. There are several possible explanations for this phenomenon. First, students may become attracted to those who sit around them after the class has begun. On the other hand, students may become involved in interaction with their sociometric choices when they enter the classroom and consequently feel obligated to sit together. And finally, students may believe their choices facilitate their classroom involvement while in actuality they have facilitated sociometric attraction. Whatever the reason, while students indicate that they will not give up a preferred seat to sit by their sociometric choices, in actuality they do sit by others toward whom they feel attracted.

TABLE 1

ACTUAL SOCIOMETRIC SEATING SELECTION		
Sits by Sociometric Choices		
yes	no	
97	15	Total =112

χ^2 =60.036 $p < .05$

TABLE 2

ACTUAL SEATING POSITIONS NEAR FIRST SOCIOMETRIC CHOICES		
Relative Position		
Side-by-Side	Front/Back	
53	11	Total=64

$\chi^2 = 27.563 \quad p < .05$

TABLE 3

Preference for Sociometric Seating

Changed Seats		
Yes	No	
32	76	Total = 108

$\chi^2 = 17.926$, $p < .05$

REFERENCES

Adams, R.S. Location as a feature of instructional interaction. Merrill-Palmer Quarterly, 1969, 15, 309-321

Barbour, A. Sociometric choice. Unpublished manuscript, Department of Speech Communication, University of Denver, undated material.

Barbour, A. Sociometric meaning in interpersonal relationships. Group Psychotherapy, 1968, Bol. XXI, No. 4.

Becker, R.D., Sommer, R., Bee, J., Oxley, B. College classroom ecology. Sociometry, 1973, 36, 514-525

Byrne, D., Lamberth, J., & Ervin, C. Continuity between the experimental study of attraction and real-life computer dating. Journal of Personality and Social Psychology,1970, 16, 1, 157-165.

Dykman, B.M. and Reis, H.F. Personality correlates of classroom seating position. Journal of Educational Psychology, 1977, 71, 3, 346-354.

Gronlunk, N.E. Sociometry in the classroom. New York: Harper, 1959.

Hale, A. Conducting clinical sociometric explorations. Roanoke, VA: Privately Published, 1981.

Hare, A.P. and Bales, R.F. Seating position and small group interaction. Sociometry, 1963, 26, 480-485.

Hufman, M. Seat selection as nonverbal communication. Unpublished doctoral dissertation, University of Denver, 1983.

Hufman, M. and Barbour, A. Seat selection and communication behavior. Journal of Professional Studies. 1984,

Kinarthy, E.L. The effects of seating position of performance and personality in a college classroom. Unpublished doctoral dissertation, University of Southern California, 1975.

Koneya, M. The relationship between verbal interaction and seat location of large groups. Unpublished doctoral dissertation, University of Denver, 1973.

Koneya, M. Location and interaction in row-and-column seating arrangements. Environment and Behavior,1976, 8, 2, 265-282.

Mehrabian, A. Inference of attitudes from the posture, orientation, and distance of a communicator. Journal of Consulting and Clinical Psychology, 1968, 32, 3, 296-308.

Mehrabian, A. Silent Messages. Belmont, California: Wadsworth Publishing Company, 1981.

Moreno, J.L. Who Shall Survive? Foundations of Sociometry, Group Psycholotherapy, and sociodrama. Beacon, New York: Beacon House, 1953.

Mouton, J.S., Blake, R., & Frachter, B. The validity of sociometric responses. New York: Beacon House, 1955.

Moxey, K.S. The relationship of the seating choice of college students to academic achievement and certain personality factors. Unpublished doctoral dissertation, North Texas State University, Denton, Texas 1964.

Pedersen, D.M. Relationships of ratings of classroom performance and enjoyment with seat selections. Perceptual and Motor Skills, 1977, 45, 601-602.

Schaefer, C.E., & Higgins, J. A note on the relationship between the comfortable interpersonal distance scale and the sociometric status of emotionally disturbed children. The Journal of Genetic Psychology, 1976, 128, 91-93.

Schwebel, A.I. Physical and social distancing in teacher-pupil relationships. Unpublished doctoral dissertation, Yale University, New Haven, Connecticut, 1969, 1551-1613.

Sundstron, E., & Altman, I. Interpersonal relationships and personal space: research review and theoretical model. Human Ecology, 1976, 4,1.

Walberg, H. Physical and psychological distance in the classroom. The School Review, 1969, 64-70.